

CERTIFICATE OF ACCREDITATION

ISUGMP Solution

Accreditation No. : KC22-403

Corporation Registration No. : 120111-0968000

Address of Laboratory : 12, Gaetbeol-ro, Yeonsu-gu, Incheon, Republic of Korea
#211, #307, #314, Pilot Plant Building, Incheon
Technopark

Date of Initial Accreditation : July. 20, 2022.

Validity of Accreditation : July. 20, 2022. ~ July. 19, 2026.

Scope of Accreditation : Attached Annex

Date of issue : March. 05, 2025.

This calibration laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to Joint ISO-ILAC-IAF Communiqué).



Oh, Kwang-Hae

Head

Korea Laboratory Accreditation Scheme

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 & KS Q ISO/IEC 17025:2017

ISU GMP Solution Co., Ltd

(Rm 21999) #211,#307,#314 Pilot Plant Building, Incheon TechnoPark, 12, Gaetbeol-ro, Yeonsu-gu, Incheon, Republic of Korea

Phone : 82-32-832-1036, Fax : 82-32-832-1037, E-mail : isugmp@isugmp.com

CALIBRATION

Valid To : July. 19, 2026

Accreditation No : KC22-403

In recognition of the successful completion of the KOLAS evaluation process,
accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
204. Pressure			503. Humidity					
20402	Manometers ; Beveled, U-shaped, short tubular, etc.	Y	50302	Relative humidity hygrometers; polimer thinfilm, hair, etc.	N			
20406	Absolute pressure gauges ; with dial, digital, barometers, recorders, etc.	Y	50304	Temperature humidity recorders; Hygrothermograph, etc	N			
20408	Compound pressure gauges	Y	50305	Transducers; dew-point /relative humidity	N			
20409	Differential pressure gauges ; with dial, digital	Y	50306	Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc.	Y			
20411	Gauge pressure gauges ; dial, digital, recorders, etc.	Y						
20412	Pressure transducers/ transmitters	Y						
20413	Dial type vacuum gauges	Y						
501. Contact thermometry								
50101	Temperature generators: ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y						
50102	Temperature indicators /recorders/controllers, temperature calibrators	Y						
50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y						
50105	Thermal expansion thermometers; bimetal, gas or liquid type	Y						
50106	Thermomecouples: noble metal, base metal, pure metal, special type, etc.	Y						
50107	Temperature transducers	Y						

Note

- This laboratory provides calibration services in permanent standard laboratory and at on-site.
- Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-007.
- On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.
- Measurement uncertainty normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $K=2$. It expresses the lowest uncertainty of measurement that can be provided by accredited calibration laboratories in normal conditions.
- Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than measurement uncertainty on scope of accreditation in general.
- If continuous calibration range is divided, each divided range's endpoint indicates inclusive.
* ex) If calibration range is divided to (0 ~ 25) mm and (25 ~ 100) mm, 25 mm in first range indicates inclusive and 25 mm in second range indicates exclusive.

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Manometers ; Beveled, U-shaped, short tubular, etc.	20402	(0 ~ 100) kPa	8.7×10^{-3}	Digital Pressure Calibrator / ISUGS-I-20402
Absolute pressure gauges ; with dial, digital, barometers, recorders, etc. Dial,digital,barometers	20406	(5 ~ 7 000) kPa abs	7.2×10^{-4}	Digital Pressure Calibrator / ISUGS-I-20406
Compound pressure gauges	20408	(-95 ~ 0) kPa (0 ~ 7) MPa	0.012 kPa 5.8×10^{-4}	Digital Pressure Calibrator / ISUGS-I-20408
Differential pressure gauges ; with dial, digital	20409	(0 ~ 500) Pa (0.5 ~ 14) kPa	0.7 Pa 3.4 Pa	Digital Pressure Calibrator / ISUGS-I-20409
Gauge pressure gauges ; dial, digital, recorders, etc.	20411	(0 ~ 7) MPa	8.6×10^{-5}	Digital Pressure Calibrator, Air Dead Weight Tester / ISUGS-I-20411
Pressure transducers/transmitters	20412	(5 ~ 7 000) kPa abs (-95 ~ 0) kPa (0 ~ 7) MPa	5.8×10^{-4} 0.015 kPa 5.8×10^{-4}	Digital Pressure Calibrator, Multimeters / ISUGS-I-20412
Dial type vacuum gauges	20413	(-95 ~ 0) kPa	0.3 kPa	Digital Pressure Calibrator / ISUGS-I-20413

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature generators: ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101	(-90 ~ 0) °C (0 ~ 200) °C	0.09 °C 0.05 °C	SPRT / ISUGS-I-50101
Temperature indicators/recorders /controllers, temperature calibrators (Temperature indicators/recorders /controllers) With Sensor Without Sensor	50102	(-90 ~ 200) °C (-90 ~ 200) °C	0.073 °C 0.062 °C	SPRT, Temperature Calibrators / ISUGS-I-50102
Resistance thermometers; SPRT, IPRT, IPRT	50104	(-90 ~ 0) °C (0 ~ 200) °C	0.08 °C 0.02 °C	SPRT / ISUGS-I-50104
Thermal expansion thermometers; bimetal, gas or liquid type Bimetal	50105	(-50 ~ 200) °C	2.0 °C	SPRT / ISUGS-I-50105
Thermocouples: noble metal, base metal, pure metal, special type, etc. Base metal	50106	(-90 ~ 200) °C	2.0 °C	SPRT / ISUGS-I-50106
Temperature transducers	50107	(-90 ~ 0) °C (0 ~ 200) °C	0.15 °C 0.67 °C	SPRT, Multimeters / ISUGS-I-50107

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Relative humidity hygrometers; polimer thinfilm, hair, etc. (polimer thinfilm) Humidity Temperature (hair) Humidity Temperature	50302	(30 ~ 90) % R.H. (-20 ~ 70) °C (30 ~ 90) % R.H. (-10 ~ 50) °C	2.3 % R.H. 0.7 °C 3 % R.H. 2 °C	Dewpoint Meter / ISUGS-I-50302
Temperature humidity recorders; Hygrothermograph, etc Hygrothermograph Humidity Temperature	50304	(30 ~ 90) % R.H. (-10 ~ 50) °C	3.0 % R.H. 2.0 °C	Dewpoint Meter / ISUGS-I-50304
Transducers; dew-point /relative humidity Humidity	50305	(30 ~ 90) % R.H.	2.2 % R.H.	Dewpoint Meter, Multimeters / ISUGS-I-50305
Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc. Temperature and humidity chamber Humidity Temperature	50306	(30 ~ 90) % R.H. (-60 ~ 0) °C (0 ~ 150) °C	2.6 % R.H. 0.4 °C 0.8 °C	Dewpoint Meter, Temperature Recorders / ISUGS-I-50306